

Yarmouk University
Faculty of Economics & Administrative Sciences
Accounting Department

Master Thesis Under the Title of:

The Impact of Board Composition on Voluntary Disclosure in the Annual Reports of Jordanian Firms Listed on the Amman Stock Exchange: An Empirical Study

أثر بنية مجلس الإدارة على الإفصاح الاختياري في التقارير السنوية للشركات الأردنية المدرجة في بورصة عمَان: دراسة ميدانية

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December, 2013

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Dedication

This Thesis Is Dedicated To:

My Dearest Parents
My Brothers
My Sisters

For their Love, Support And Encouragement.

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Abstract

Ali, Ala'eddin Jamil. The Impact of Board Composition on Voluntary Disclosure in the Annual Reports of Jordanian Firms Listed on the Amman Stock Exchange: An Empirical Study.

Department of Accounting

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(Supervisor: Dr. Iaad Issa Mustafa Al-Sartawi)

This study aims to examine the impact of board composition on voluntary disclosure in the annual reports of Jordanian firms listed on the Amman Stock Exchange. Content analysis is used to collect the required data from the 2012-annual reports of 103 firms listed on ASE.

The study revealed that Jordanian firms with high level of board ownership concentration tend to disclose less information in their annual reports. On the other hand, the presence of foreign investment, female directors on the board, and more mature directors tend induce firms to to disclose more voluntary information.

The study recommended policy makers to think about new ways to protect the rights of minor and/or outside shareholders in obtaining information in order to mitigate the effect of the high level board ownership concentration. Furthermore, Jordanian firms may need to consider appointing more female directors to benefit the board’s decision making process with their new perceptions and the mutual exchange of ideas stemming from their dispersed backgrounds.

Key words: Board composition, voluntary disclosure, publicly listed firms, ASE

ملخص الدراسة

علي، علاء الدين جميل. أثر بنية مجلس الإدارة على الإفصاح الاختياري في التقارير السنوية للشركات الاردنية المدرجة في بورصة عمَان: دراسة ميدانية، رسالة ماجستير بجامعة اليرموك، ٢٠١٣.

إشراف: د. اياد عيسى السرطاوي

هدفت هذه الدراسة إلى اختبار أثر بنية مجلس الإدارة على الإفصاح الاختياري في التقارير السنوية للشركات الأردنية المدرجة في بورصة عمان. تم جمع البيانات اللازمة للدراسة من خلال تحليل محتوى التقارير السنوية للعام ٢٠١٢ لعينة مكونة من ١٠٣ شركة.

توصلت الدراسة إلى أن الشركات التي تسيطر مجالس إدارتها على نسبة كبيرة من أسهمها تميل للإفصاح عن كمية قليلة من المعلومات الاختيارية. ومن جهة أخرى توصلت الدراسة إلى أن الشركات التي ترتفع فيها نسبة الملكية الأجنبية، وتلك التي تضم مجالس إداراتها نسبة أكبر من العنصر النسائي ونسبة أكبر من الأعضاء كبار السن تميل على الإفصاح عن كمية أكبر من المعلومات الاختيارية في تقاريرها السنوية.

وأوصت الدراسة الجهات المعنية بالتفكير بآليات جديدة لحماية حقوق الأقليات في الحصول على المعلومات في ضوء ارتفاع نسبة تركز الملكية لأعضاء مجلس الإدارة. كما أوصت الدراسة الشركات بالتفكير في استقطاب المزيد من العنصر النسائي كأعضاء في مجالس إدارتها وذلك للاستفادة مما يملكنه من خبرات ووجهات نظر مختلفة للمواضيع المطروحة، الأمر الذي يعود بالنفع على عملية اتخاذ القرار في هذه المجالس.

كلمات مفتاحيه: بنية مجلس الإدارة، الإفصاح الاختياري، الشركات المدرجة، بورصة عمان.

CHAPTER ONE: INTRODUCTION

1.1. Background and rational

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1.1. Background and rational

In their irrelevancy theory of capital structure Modigliani and Miller (1958) assume perfection capital market, where insiders (managers) and outsiders (shareholders and/or investors) have no asymmetric information. With no conflict of interest between shareholders and managers and there are no agency problem exist Myers and Majluf (1984) argue that information asymmetry will lead to mispricing the value of the firm in the market, and thus, a loss of wealth for shareholders. This is can be attributed to the adverse selection problem that might arise because managers are more knowledgeable than shareholders and/or investors who Pierpont the new stock issuance as a bad signal and then pricing new stock according how the firm finances its new project by issuing new securities, these securities will be under-priced. However, value maximizing firm tend to disclose more information to outsiders to reduce the level of adverse selection and asymmetries information which affect on the firm value. Welker (1995) demonstrated that higher disclosure policy reduces information asymmetry. Bloomfield and Wilks (2000) showed that higher-quality disclosure ensures investors pay a high price for shares. Heflin *et al*. (2002) argue that a firm with high-quality accounting disclosure enhances its market liquidity through reducing information asymmetries across traders. However value maximizing firms tends to disclose more information to outsiders to reduce the level of adverse selection and asymmetries information.

Firm's annual report discloses mandatory and non-mandatory information. Mandatory information is provided in accordance to laws, regulations and adopted accounting standards. On the other hand, non-mandatory or voluntary information is left to the management’s discretion (Cheng and Courtenay, 2006; Chen and Jaggi, 2000). Management decides on the type and amount of non-mandatory information to be disclosed in the firm's annual report (Eng and Mak, 2003). Hence, firms differ in the type and amount of voluntary information disclosed in their annual reports. For example, some firms focus more on strategic information. Other firms may concentrate on their marketing plans, their commitment to social and environmental issues, etc. (Lim *et al*., 2007). Regardless of the type of voluntary information disclosed, firms have to consider the cost and benefit of providing such information to the public.

Voluntary disclosure provides many benefits to the firm. For example, Meek *et al*. (1995) argue that disclosing more information than the mandatory required increases the competitiveness of the firm in the stock market. This is true, as investors require information to value different firms in order to make investment decisions such as selecting a portfolio of securities. Cooke (1989) claims that voluntary disclosure attracts new

investors. Consequently, this may boost the demand and the prices on the firm's share.

Healy and Palepu (2001) believe that voluntary disclosure can solve both the principal-agent problem and the information asymmetry problem. The principal-agent problem arises from the conflict of interests between shareholders and managers because of the separation between ownership and management. The decisions made by management may be directed toward maximizing their own benefit rather than the shareholders benefit. For example, managers may focus on short-term projects that allow them to reap the benefit earlier and enhance their reputation quickly, rather than more profitable long-term projects (Masulis, 1988). The information asymmetry problem arises from information differences between insider and outsiders. Consequently, investors may value all firms at an average level. This means that good firms may be undervalued and bad firms may be overvalued. This can potentially erode the functionality of the capital market (Akerlof, 1970).

Kim and Nofsinger (2007) suggest two mechanisms to solve these problems: incentives and monitoring. The incentive mechanism attempts to align the interests of the managers with those of the investors. This requires management to disclose relevant information to the investors. The second

mechanism is to effectively monitor the behaviour and actions of management by the board of directors. Empirical evidence shows that board monitoring improves the quality of managers' decisions (Monks and Minow, 1995). According to Healy and Palepu (2001) board monitoring will insure that management behaves in the sense of increasing the shareholders' interests and discloses credible rather than self-serving voluntary information. However, the effectiveness of the board monitoring is determined among other things by its composition. Therefore, board composition is expected to affect the level of voluntary disclosure.

1.2. Problem statement

In 1997, the Amman Financial Market issued The Securities Law, 1997 that was the first major source for mandatory disclosure in Jordan, and a turning point and qualitative leap for companies listed on the Jordanian capital market in respect to mandatory disclosure. The important features of this Law were first the establishment of the Amman Stock Exchange, and second the Directives of Disclosure and Auditing and Accounting Standards (DDAAS), which is considered to be, beside IASs, the vehicle of disclosure requirements in Jordan. Third, the Law required the adoption of IASs in 1998. Subsequently, the 2002 Securities Law contained a few amendments to the 1997 Law, such as identifying insiders and extending the tasks and authorities of the audit committee. However, there were no

major differences, as regards disclosure requirements, between the 1997 Securities Law and the 2002 Securities Law.

Amman stock exchange is a small and thin market; this market is a good environment to create asymmetric information, which poses too much risk for outsiders. Therefore, it is expected that the investor cannot determine the price of new equity or debt issues because they are unable to monitor all aspects of investment projects and managerial behaviour and cannot acquire the appropriate information . This will raise the costs of external finance and then induce Jordanian firms to rely on internally generated funds from retained earning rather than external funds, and raising debt when external funds are needed. Hence, we could expect that the pecking order theory will be more applicable to Jordanian firms.

Transparency of corporate disclosure is an important component of corporate governance principles worldwide. Recent corporate scandals further reinforce this point of view (Qu and Leung, 2006). To build a good corporate information disclosure system, firms are encouraged to, voluntarily; disclose all the information that may have a material effect on the decision. In this sense, the current study attempts to answer the following question: *how far the board composition affects the level of voluntary disclosure in the annual reports of Jordanian firms listed on Amman Stock Exchange (ASE)?*

1.3. The objectives of the study

1- To identify and describe the composition of corporate boards in Jordanian firms listed on ASE.

2- To investigate the relationship between board composition and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.

1.4. The importance of the study

Voluntary disclosure has been extensively investigated by researchers Since the 1970s. One stream of these studies focuses on the impact of firm characteristics such as size, listing, leverage, profit and growth. The other stream focuses on corporate governance including ownership structure and board composition on disclosure. However, the big bulk of these studies is conducted in mature capital markets and emerging markets in Asia (See for example: Gray *et al*., 1995; Meek and Gray, 1995; Lang and Lundholm, 1996, Eng and Mak, 2003; Hossain and Taylor, 2007). Few studies have documented voluntary disclosure in developing countries like Jordan (Xiao Yuan, 2004).

The current study is expected to contribute to the literature on the determinants of voluntary disclosure by providing empirical evidence on the impact of board composition on corporate disclosure in an emerging economy; Jordan. Furthermore, knowing the extent of voluntary disclosure

in the annual reports of Jordanian firms may help policy-makers in Jordan to evaluate whether the current mandatory disclosure is sufficient for the user of these reports or not. This may assist in improving the current mandatory disclosure requirements. Similarly, understanding the impact of board composition on voluntary disclosure may assist policy-makers in revising the items (general guidelines and requirements) that relate the board of directors in the corporate governance code in Jordan.

1.5. Structure of the Study

Chapter 1: Introduction

This chapter provided an overview of the study. It included a brief background and rational, problem statement, objectives and importance of the study.

Chapter 2: Theoretical background and literature review

This chapter discusses the concepts of agency problem, voluntary disclosure, and board composition. Also, it provides a review of the empirical studies on board composition and voluntary disclosure.

Chapter 3: Research methodology

This chapter describes the study population and sample, data collection methods and procedures, variables and model to be tested. Also, it presents the hypotheses to be examined in the current study.

Chapter 4: Data analysis and hypotheses testing

This chapter presents the empirical results of testing the proposed model. Also, it presents the result of testing the hypotheses.

Chapter 5: Conclusions

This final chapter presents the conclusions and implications of the study. It also discusses the limitations of the study and some suggestions for future research.

CHAPTER TWO: THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. Theoretical framework

2.1.1. Agency problem

2.1.2. Asymmetric information

2.1.3. Corporate disclosure

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2.2. Review of related literature

2.2.1. Studies in developing countries

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2.3. Distinguishing features of the current study

2.1. Introduction

The current study aims at investigate the Impact of board composition on voluntary disclosure in the annual report of Jordanian firms listed on the Amman stock exchange. There is evidence to suggest that voluntary disclosure tend to mitigate the influence of information asymmetries and agency problem on the firm value where it make these problem less sever.

This chapter consists of two main section: the theoretical frame work and review of related literature.

2.2. Theoretical framework

It's well-know that Modigliani and Miller (1958,1963) ignore the presence of agency information problem that might influence the cost of external financing and there by the value. They assume information are symmetries with no agency conflict that insiders and outsiders have the same access to information about firms performance and their future prospect, Hence managers have no information advantage on the outsiders, making work effectively on behalf of shareholders, which create no conflict of interest between managers and shareholders. However, Jensen and Meckling (1967) and Myers and Majluf (1984) argue that information is not symmetries and agency conflict between shareholders and managers is posrble in went following we present:

2.2.1. Agency problem

Organizations are characterized by their complexity and the diffuse ownership of stockholdings. Accordingly, shareholders (owners) contract

the agent (managers) to run their business. In order for managers to effectively manage the organization, shareholders delegate some decision-making authority to them. However, this transfer of decision control initiates the agency problem. Agency theory discusses the conflict between owners and managers that arises as a result of the separation between ownership and management. The agency theory views the relationship between owners and managers as a contract where management commits to run the business in the best interest of the owners. On the other hand, owners delegate management the authority to make decisions (Jensen and Meckling, 1976). However, decisions made by managers may be directed to maximize their own benefit rather than the shareholders'. For example, to gain benefits early and enhance their reputation quickly managers may focus on short-term rather than more-profitable long-term projects (Masulis, 1988). Furthermore, to defend their positions, managers may select less-risky lower-profit investments (Garvey and Hanka, 1998). This reduces the risk of bankruptcy and thus the chance of losing their jobs (Hunsaker, 1999).

2.2.2. Asymmetric information

The asymmetries information problem arises from information differences between insider and outsiders. It can potentially breakdown the functioning of the capital market (Akerlof, 1970). For example, if there are two types of

news (information): good news and bad news. Both investors and stakeholders are rational and value investments conditional on their own information. If investors cannot distinguish between the two types of news, stakeholders with “bad” news will try to make this news as valuable as the “good” news to take decisions. Realizing this possibility, investors will value both good and bad news at an average level. Therefore, if the asymmetries information problem is not fully resolved, the market may undervalue some good news and overvalue some bad news according to the information available to investor. Bloomfield and Wilks (2000) showed that higher-quality disclosures ensure investors pay a high price for shares because the disclosure is a main reason to many attribute to the fact that disclosure will reduce asymmetries information, there may reduce the risk which means reduce the cost of issuing equity and increase the price of shares . Welker (1995) demonstrated that higher disclosure policy reduces information asymmetry. According to Heflin *et al*. (2002) a firm with high-quality accounting disclosure enhances its market liquidity through reducing information asymmetries across traders.

There are many solutions to the information asymmetry problem. For example, the contracts between manager and investors will provide reward for more disclosure of private information, thus mitigating the miss valuation problem (Kreps, 1990). Another potential solution is the

regulation that requires managers to fully disclose their private information. Mandatory disclosure in the annual reports attempts to reduce information asymmetry by law. Investors would be able to use the information disclosed for taking decisions and other investing activities. When management discloses more information than is mandated by law, it means that they are disclosing voluntary information. Voluntary disclosure does provide useful information for investment purposes (Balachandran and Bliss, 2004).

2.2.3. Corporate disclosure

Disclosure is the process through which an entity communicates with the outside world. The significance of proper and adequate corporate disclosure cannot be over emphasized in a free economy where the market allocates the resources to different sectors of the economy. Baumol *et al.,* (1965) reported that the lack of adequate disclosure can create ignorance in the securities market and can result in misallocation of resources in the economy (Chandra, 1974).

Which information to disclose is the main determinant of the effective capital markets (Ho, 2003). Some firms disclose about the mandatory information. Other firms disclose more than mandatory information if the benefit of this voluntary disclosure exceeds its cost. Increasing the level of

voluntary disclosure to the public can lower firm's capital costs, gain investor confidence, and improve the marketability of shares (Meek *et al*., 1995; Kristandl and Bontis, 2007).

Mandatory and voluntary disclosures are the best techniques to communicate the information to shareholders. Mandatory disclosure refers to compliance with laws, regulations, and accounting standards adopted. If a disclosure item is mandatory, then that item will definitely be disclosed; otherwise, the firm will receive a qualified audit report or some other regulatory penalties. Mandatory disclosure represents the minimum level of disclosure required by the market. Users need to review the mandatory disclosure to be able to assess the firms in the market.

On the other hand, voluntary disclosure is an extension of the basic mandatory information disclosed in the firm's annual report. It reflects the economic realities of an entity in a meaningful, transparent, and comparable manner (Wong and Brown, 2008). Such additional information is disclosed by firms to distinguish themselves from other low-performance firms (Watson, *et al*., 2002)

In order to protect the interests of public investors and other market participants, an effective regulatory system of corporate disclosure is required. With the development of the securities market in Jordan, many regulations relating to the public disclosure of information by listed firms have been issued. Specific regulations governing information disclosure of publicly-listed firms in Jordan include: (i) instructions of issuing companies disclosure, accounting and auditing standards for 2004 and (ii) the corporate governance code for shareholding companies listed on the Amman Stock Exchange issued by (Jordan Securities Commission)

2.2.4. Board composition and voluntary disclosure

Board of directors is simply defined as a group of persons elected by the shareholders of a corporation to govern and manage the affairs of the firm (Monks and Minow, 1995). The board has five functions to fulfil: to hire, evaluate perhaps even fire top management, with the position of CEO being the most important to consider; to vote on major operating proposals; to vote on major financial decisions; to offer expert advice to management and to make sure the firm's activities and financial condition are accurately reported to its shareholders (Kim and Nofsinge, 2007).

Through their effective monitoring to the behaviour and actions of management, directors work as a control mechanism in corporate

governance to reduce the principal-agent problem and the asymmetric information problem (Patelli and Prencipe, 2007). Empirical evidence shows that board monitoring improves the quality of managers' decisions (Monks and Minow, 1995). According to Healy and Palepu (2001) board monitoring will insure that management behaves in the sense of increasing the shareholders' interests and discloses credible rather than self-serving voluntary information. However, the effectiveness of the board monitoring is determined among other things by its composition. Therefore, board composition is expected to affect the level of voluntary disclosure.

Board composition can be defined in various perspectives, including value system, nationality, gender, board size, industry background, etc. (Van der Walt *et al*., 2006; Kang *et al*., 2007). However, in the current study the "board composition" includes the following perspectives: board size, proportion of non-executive directors, duality of CEO and chairman positions, ownership concentration of board members, institutional ownership, foreign investment, member's age, educational level, and gender. All these perspectives are discussed in the following subsections.

2.2.4.1. Board size

Monitoring and controlling management actions are the most important functions of the board of directors. According to Gandia (2008) increasing the number of board members improves the capability of the board in monitoring and controlling management actions. This enhances the transparency and the disclosure of more information by management. Adam *et al*., (2004) argue that larger boards have varied experiences and dispersed opinions. This, in turn, increases their monitoring capacities, and enhances the firm's disclosure policies. Empirical evidence reported by Cheng and Courtenay (2006) suggest that larger boards tend to be associated to greater levels of information disclosure.

On the other hand, it is argued that the monitoring capabilities of the board decreases as the board size increases (Cerbioni and Parbonetti, 2007). This is explained by the coordination/communication problems associated to large groups (Bushman *et al*., 2004). In such situations, it becomes more difficult to arrange board meetings, reach board members, as well as to obtain consensus regarding issues discussed in these meetings (Vafeas, 2000). Empirical results reported by Cerbioni and Parbonetti, (2007) revealed a negative relationship between board size and disclosure.

It is worth noting that in Jordan, the corporate governance code for publicly listed firms, recommends a board with more than five members and less than fifteen for the industrial and services sectors (JSC, 2009). However, for the insurance sector the code recommends a board not less than seven members (IRC, 2006).

2.2.4.2. Proportion of non-executive directors

Non executive directors are board members who are not employed by the firm (Becht *et al*., 2005). They are viewed as a control mechanism as they perform an independent monitoring function (Patelli and Prencipe, 2007).. Their presence on the board could control the agency problem and reduce the information asymmetry between management and shareholders by providing more voluntary disclosure. (Lim *et al*, 2007). Recent studies show that the higher proportion of non-executive directors on boards, the more information they would like to disclose to outside investors. For example, Ajinkya *et al*. (2005) report that companies with more non executive directors are more likelihood to give a forecast in their annual reports. Cheng and Courtenay (2005) provide further evidence that firms with a higher proportion of non-executive directors have significantly higher levels of voluntary disclosure than firms with balanced boards. In contrast, other studies report a significant between the proportion of non-executive directors on the board and the level of voluntary disclosure (See

for example, Eng and Mak, (2003); Barako *et al*., (2006); Moataz and Hussainey (2010).

In Jordan, the Code of Corporate Governance recommends that at least one third of the board members to be independent (JSC, 2009).

2.2.4.3. Duality of CEO and chairman positions

Duality of CEO and chairman positions means that the person who serves as a chief executive officer (CEO) is the same person who serves as the chairman of the board of directors. This is a critical aspect of corporate governance since it may distort the board independence and reduces the effectiveness and efficiency of the board monitoring and controlling capabilities (Khanchel, 2007). Role duality concentrates the power of managing business affairs in the hands of a single individual (Ho and Wong, 2001; Gul and Leung, 2004). This may reduce the quality and quantity of the information disclosed and consequently raises the information asymmetries problem (Li *et al.,* 2008). According to Finkelstein and Hambrick, (1996) the combination of the role of CEO and chairperson is an indicator of CEO power over a board. This suggests that role duality reduces the board's ability to effectively control management, which consequently lowers the level of disclosure. Different results have been reported by empirical studies. For example: Ho and Wong, 2001; Gul

and Leung, 2004; Donnelly and Mulcahy, 2008 found a significant negative relationship between CEO duality and voluntary disclosure. Other studies such as: De Miguel *et al*., 2004; Cheng and Courtenay, 2006) could not find a significant relationship between CEO duality and the level of voluntary disclosure.

2.2.4.4. Ownership concentration of board members

Akhtaruddin and Haron (2010) discuss the effect of ownership concentration on voluntary disclosure. They argue that ownership concentration reflects the impact of the majority shareholders. Outside investors and/or shareholders have no access to the firm's information. As a result, they depend on management to obtain the information they need. They effect management to disclose adequate information through the board. This suggests that adequate disclosure depends on the board and the affecting power of the outside shareholders. Thus, the higher the outside ownership is (i.e., the lower the level of board ownership concentration) the greater the monitoring over the board, the greater the disclosure (Eng and Mak, 2003). In contrast, the need for additional disclosure decreases when the level of board ownership concentration is high. A major shareholder can acquire information either through his position as a board member or directly from informal channels. Thus, firms with high ownership concentration tend to reduce additional information (Bangh◌ّj and

Plenborg, 2008). Empirically, Mak and Li (2001) provide evidence that executive share ownership is negatively related to the board monitoring over management activities. Chau and Gray (2002) indicate that wider ownership is positively related to voluntary disclosure. They argue that a higher level of ownership concentration may be an alternative way to acquire more information and requires less voluntary disclosure. Vein, *et al*., (2002) argue that entrenchment effect of ownership concentration to the board potentially affects corporate transparency. Thus, the firm incurs high agency cost for lack of transparency. Eng and Mak (2003) report a negative relationship between managerial ownership and voluntary disclosure. Similar results are reported by other studies such as: Barako *et al*., (2006); Xiao and Yuan (2007); Lim *et al*. (2007);

2.2.4.5. Member's Nationality

Several studies investigate the relationship between foreign ownership and corporate disclosure. According to Bokpin and Isshaq (2009), foreign ownership is viewed as a mechanism for improving corporate governance Haat *et al*., (2008) argue that foreign ownership can improve and develop the corporation in the developing country. Mangena and Tauringana (2007) explain that corporations provide more disclosure to reduce information asymmetry between foreign and domestic investors. Bokpin and Isshaq (2009) explain that the amount of foreign investments in firms with

governance problems is less than their counterparts with good corporate governance practices. Since foreign investors have less information than domestic investors, this encourages them to invest more in firms that disclose more information (Mangena and Tauringana, 2007). Based on that, we can argue that the presence of foreign investors, as an aspect of governance mechanism, may lead to increase the level of voluntary disclosure

2.2.4.6. Institutional ownership

Institutional shareholders play an important role in enhancing effective corporate governance. They are considered a powerful governance mechanism for ensuring the alignment of management interests with those of the shareholders (Solomon 2010). Their monitoring role is increasingly crucial as they have grown so large and influential and gaing significant ownership concentration. Institutional ownerships and family ownership have been studied in the extant research. However, findings are unclear. For example, Chau and Gray 2002; Makhikja and Patton 2004; and Barako *et al*., 2006, found a statistically significant positive relationship between the level of disclosure and external ownership. On the otherhand, Arcay and Vázques (2005) found a significant negative relationship.

2.2.4.7. Member's Age

Age represents the extent of experience and risk-taking manner (Herrmann and Datta, 2005). According to Hambrick and Mason (1984) young managers tend to be more risk taker than older managers. They are highly motivated to process new ideas, and less acceptable to status quo. Thus, firms with young managers experience higher growth rates than firms with older managers (Barker and Mueller, 2002).

On the other hand, it is argued that older managers have richer skill-based competencies because of their experiences and practices (Reed and Defillippi, 1990). Thus, they have significant impact on the firm's performance. However, previous studies on corporate structure focused on testing the impact of certain board characteristics such as board size, Independence, Duality of CEO and chairman position, to name few. However, board age received little or no attention (Darmadi, 2010). The existing-limited empirical evidence provides evidence that younger CEO or board is positively associated with higher financial performance. For example, Faleye (2007) found that board age has an impact on firm value almost twice as large as the effect of board size. Similarly, Nakano and Nguyen (2011) revealed that older boards are associated with significantly lower performance.

It is worth noting that the Jordanian Companies Law No. 22 of 1997 and its amendments impose a minimum restriction on the age of the board member. According to Article (147), a board member should be at least 21 years old (MIT, 2010).

2.2.4.8. Member's educational level

Education level refers to the academic credentials or degrees an individual has obtained. Although education level is a continuous variable, it is frequently measured categorically in research studies. For practical reasons, we are not investigating differences among school majors. Because few organizational studies have considered differences in majors, we are interested in the level education to know how much it reflect in his decision.

2.2.4.9. Member's gender

Gender diversity has developed to be one of the challenging research issues in academia as the numbers of women in top management as well as on corporate boards increases (Singh *et al.*, 2001). The diversifying in board characteristic, especially in gender may benefit the board’s decision making process. New perceptions are presented, and ideas are mutually exchanged (Alvarez and McCaffery, 2000). Furthermore, gender diversity enriches the board's knowledge base, creativity and innovation, and

therefore becoming a competitive advantage (Watson *et al*., 1993). The importance of gender diversity in corporate governance has been discussed in the literature (See for example: Stryker and Burke, 2000; Walt and Ingley, 2007; Huse and Solberg, 2006; Peterson and Philpot, 2006; Schubert, 2006). The findings of Huse and Solberg (2006) suggest that women board members are more interested for meetings than men. Therefore they are more likely to take good decisions. Schubert (2006) notes that women have better multi-tasking skills, risk management and communicative abilities as compared to their male counterparts. These qualities enable them to take on different responsibilities at the same time, as well as to communicate and manage different situations within and outside the organization effectively. Adams and Ferriera (2008) found that female directors have a strong effect on board input and output. Furthermore, they have better attendance records than male, and are more likely to join monitoring committees. Their results suggest that gender-diverse boards allocate more effort to monitoring.

Gibbins *et al*., (1990) argues that disclosure is a managed activity which can be explained by the context in which it occurs. Since disclosure is the function of the board, therefore, the Gender diversity of its members may explain the disclosures practices of the firms in the annual reports.

2.3. Literature Review

There is an ample amount of literature on relationship between corporate governance including ownership structure and board composition, and voluntary disclosure. However, the big bulk of these studies are conducted in mature capital markets and emerging markets in Asia. Few studies have documented this relationship in developing countries like Jordan. The following subsections presents a review of a number of related studies the researcher has access to.

2.3.1. Studies in developing countries

Barako *et al.*, (2007) examined factors associated with voluntary disclosure of four types of information: general and strategic, financial, forward-looking, and social and board information in the annual reports of listed Kenyan firms 1992 to 2001. The study investigates the extent to which corporate governance attributes, ownership structure and firm characteristics influence voluntary disclosure of various types of information. To estimate the determinants of voluntary disclosure of various types of information, he use pooled Ordinary Least Square (OLS) with Panel-Corrected Standard Errors (PCSEs). The results indicate that, disclosures of all types of information are influenced by corporate governance attributes, ownership structure and corporate characteristics. In particular, the results also suggest that size and firms are significantly

associated with the voluntary disclosure of all four types of information disclosures.

Matoussi and Chakroun (2007) studied the interactions between the composition of the board of directors, ownership concentration and voluntary disclosure in the annual reports of non-financial Tunisian firms during the period 2003-2005. The results of their study showed that the extent of voluntary disclosure tends to increase across the time. In addition, the independence and the structure of the board of directors and the family control of the firm did not lead to more voluntary disclosure.

Hossain and Hammami (2009) examine empirically the determinants of voluntary disclosure in the annual reports of 25 listed firms of Doha Securities Market (DSM) in Qatar forming approximately 86% of the total firms incorporated in DSM. It also reports the results of the association between company-specific characteristics and voluntary disclosure of the sample companies. A disclosure checklist consisting of 44 voluntary items of information is developed and statistical analysis is performed using multiple regression analysis. The findings indicate that age, size, complexity, and assets-in-place are significant and other variable profitability is insignificant in explaining the level of voluntary disclosure.

Rouf (2010) examine the linkages Corporate Characteristics, Governance Attributes and the Extent of Voluntary Disclosure in the annual reports of listed companies of Bangladesh. The paper is based on a sample of 120 listed non-financial companies in Dhaka Stock Exchanges (DSE) 2008. The study used ordinary least squares regression model to examine the relationship between explanatory variables and voluntary disclosure. The empirical results indicate that a positive association between board size and voluntary disclosure, board leadership structure and voluntary disclosure and between board audit committee and voluntary disclosure. In contrast, the extent of voluntary disclosure is negatively related to proportion of INDs, ownership structure and net profitability.

Al-Moataz and Hussainey (2012) examine the relation between some corporate governance mechanisms and the disclosure level of corporate governance information in the Saudi Arabian's listed companies. Based on a sample of 97 financial reports and accounts of Saudi Arabian listed companies in 2006 and 2007, the paper uses the content analysis approach to analyse the content of these reports. In addition, a multiple regression model is used to identify the determinants of corporate governance disclosure. The study find that board independence, audit committee size, profitability, liquidity and gearing are the main determinants of corporate governance disclosure in Saudi Arabia and did not find any statistically

significant association between firm size and corporate governance disclosure.

Bhasin (2012) explores the voluntary CG practices of 50 corporations, over and above the mandatory requirements of Clause 49 of the Listing Indian firm. The study primarily used 'secondary' sources of information, both from the 'Report on CG' and the 'Annual Reports' for the financial year 2003-04 and 2004-05. In order to provide a comparison 'across' industries, corporations have been selected from four industries, viz., software, textiles, sugar and paper. Appropriate statistical tools and techniques have been applied for the analysis. It has been observed that "corporations are following less than 50 percent of the items of CG Disclosure Index. Moreover, there is no significant difference among the disclosure scores across the four industries.

Hassan (2013) examined the relationship between corporate governance mechanisms and the extent of corporate voluntary reporting in the United Arab Emirates (UAE). Based on a sample of 95 annual reports published by UAE listed firms, the paper applies multiple regression analysis to

regress governance related variables and other control variables to a voluntary disclosure index crafted for this paper, the study found that voluntary disclosure varies according to external auditor type. Other

variables are insignificant in their influence on the level of voluntary disclosure(board size, external auditor), yet the direction of their influence is as predicted except for CEO duality and foreign ownership.

2.3.2. Studies in developed countries and emerging Asian markets

Eng and Mak (2003) analyzed the impact of ownership structure and board composition on voluntary disclosure in 158 financial and non-financial Singapore listed firms (1991–1995). An aggregated disclosure score was used to measure voluntary disclosure of strategic, non-financial and financial information. The study showed that lower managerial ownership and significant government ownership are associated with increased voluntary disclosure. Moreover, an increase in outside directors reduces voluntary disclosure.

Gul and Leung (2004) examined the linkages between CEO duality and the proportion of expert independent outside directors, and voluntary corporate disclosures. The samples composed of 385 Hong Kong listed firms in the year 1996. The result showed that firms with CEO duality are associated with lower voluntary disclosure. Also, firms with a higher proportion of expertise of non-executive directors are associated with lower levels of voluntary disclosure. Finally, the negative association between CEO

duality and disclosure is weaker for firms with a higher proportion of expertise of non-executive directors.

Cheng and Courtenay (2006) studied the association between board monitoring and the level of voluntary disclosure. Data was collected from the annual reports of 104 firms listed on the Singapore Stock Exchange in the year 2000. The study revealed that firms with boards composed of a majority of independent directors have higher levels of voluntary disclosure. Furthermore, the study showed that board size and CEO duality have no significant impact on the level of voluntary disclosure.

Lim *et al.* (2007) examined the relationship between board composition and the following types of voluntary disclosure: forward looking, strategic, non-financial and historical financial. The sample composed of 324 firms from the top 500 firms listed at Australia Stock Exchange during 1999-2001. A total of 67 voluntary disclosed item were extracted from the annual reports of Australian firms. For each firm a total voluntary disclosure index and four sub-indices of voluntary disclosure were computed. The result of the two-stage multivariate analyses showed a positive association between board composition and voluntary disclosure. Furthermore, firms with more independent boards provided more voluntary disclosure of forward looking information and strategic information.

Xiao and Yuan (2007) investigated the impact of ownership structure and board composition on the level of voluntary disclosure of listed firms in China. The sample composed of 559 firms listed at Shanghai Stock Exchange at the end of 2002. The findings showed that higher block holder ownership and foreign listing ownership are related to increased disclosure. The finding also indicated that the presence of independent directors increases voluntary disclosure, while CEO duality decreases it.

Donnelly and Mulcahy (2008) investigated the relationship between corporate governance and voluntary disclosure in Ireland. The sample composed of 51 firms listed at Irish stock exchange at 2002. The study found that voluntary disclosure increases with the number of nonexecutive directors on the board. Firms that have a non-executive chairman disclose greater voluntary information than other firms. However no significant relationship between ownership structure and voluntary disclosure is found.

Chobpichien (2008) investigated whether the quality of board of directors and the ownership structure influence the voluntary disclosure in the annual reports of 317 non-financial firms listed on the Stock Exchange of Thailand in 2004. The findings showed that voluntary disclosure is influenced by the quality of board of directors and the ownership structure of the firm. The

higher the board of directors' quality, the higher is the voluntary disclosure. More precisely, the following two dimension of board of directors' quality (chairman-CEO separation, and the proportion of independent non-executive directors on the board), were significant factors associated with voluntary disclosure. Finally, control variables comprising firm size, auditor type, and earnings return were found to have a significant influence on voluntary disclosure.

Clemente and Labat (2009) examined the impact of corporate governance mechanisms on voluntary disclosure in 62 listed Spanish firms at Madrid stock exchange in 2005. The study found a significant positive relationship between independent directors and the amount of voluntary reported information. Furthermore, the study found that the duality of the CEO and Chairman positions reduces the level of voluntary disclosure, whereas, the ownership concentration had no significant effect on the level of voluntary information disclosed.

Ling and Lee (2012) investigated the impact of corporate governance structure and ownership structure on voluntary disclosure of 123 Malaysian listed firms in 2009. The results of their study indicated that corporate governance structure is significantly positively associated with voluntary

disclosure. Firms with concentrated ownership structure are associated with greater extent of voluntary disclosure.

Barros *et al.*, (2013) investigated the effect of corporate governance practices on the extent of voluntary disclosure in France. Using a panel data for 206 non-financial French listed firms during the period 2006–2009, the study found evidence that voluntary disclosure in annual reports increases with managerial ownership, board independence, board meeting frequency, and external audit quality. The study also found that larger, more profitable, and less indebted firms have greater voluntary disclosure.

2.4. Distinguishing features of the current study

- Examines more perspectives and attributes of board composition.
- Uses recent data of 2012.
- Investigates three sectors (industrial, service, and insurance) rather than one.

CHAPTER THREE: METHODOLOGY

3.1. Introduction

3.2. Population and sample

3.3. Data collection

3.4. Variables and model

3.5. Hypotheses development

3.6. Data analysis

3.1. Introduction

This study aims at investigating the impact of board composition on voluntary disclosure in the annual reports of Jordanian firms listed on the Amman Stock Exchange. The current chapter presents the methodology used to accomplish this objective. Section (3.2) presents the study population and sample selection criteria. Section (3.3) explains data collection method. Section (3.4) discusses the variables and the model to be investigated. The hypotheses development and data analysis techniques are presented in sections (3.5) and (3.6) respectively.

3.2. Population and sample

The population of the study includes all Jordanian firms listed on ASE. A total of 277 firms were listed on ASE at the end of 2012 (ASE, 2013). However, the sample of the study will include the firms that meet the following criteria:

- The firm should be listed on ASE at least for five years prior to the study.
- Firms with unavailable data are excluded.
- Firms ever going through consolidation, bankruptcy, or reorganization during the period of 2008-2012 are excluded to avoid biased results due to the effect of these events on the type and amount of information disclosed in their annual reports.

- Firms should belong to the industrial, services, and insurance sectors only. Banks are excluded from the current study due to the nature of their business, and their special controlling and monitoring requirements and regulations.

Applying these criteria resulted in a sample composed of 103 firms. Table 1 shows the distribution of these firms on the three sectors. Furthermore, Table 2 shows their summary demographic-statistics.

Table 1: The distribution of the sample on the three sectors

Sector	Number of firms	Percentage
Industrial	47	46%
Service	39	38%
Insurance	17	16%
Total	103	100%

Table 2: Summary demographic statistics for the sampled firms

Sector	Min.	Max	Mean	S.D
Size (JD)	500,000	1,080,000,000	62,000,000	160,000,000
Leverage	0.6	0.71	0.33	20.47
ROE	-0.37	0.45	0.03	0.12

According to table 2, the sampled firms varies in their size with an average total assets of JD 62 millions. On average these firms have a leverage percentage of approximately 33%. Their profitability measured by the ROE ranges between -37% and 45%. In addition, the financial statements of almost 40% of these firms are audited by one of the big-4 auditing firms.

This may attribute to the absents of develop bonds market and the adoption of conservative credit policy by commercial banks. It may also be contributed to the size affect (different size). On overage it's similar to what has been reported in other study. Jordanian firms are not highly leveraged firms. The high standard deviation implying that firms significantly different in their policy.

3.3. Data Collection

The data needed to carry out the current study is collected from the firms' 2012 annual reports as well as the directory of publicly held corporations available on ASE webpage. Content analysis is used to extract the required data from the annual reports of these firms.

3.4. Variables and model

3.4.1. Dependent variables

Voluntary disclosure is the dependent variable in the current study. A voluntary disclosure index is computed for each sampled firm based on the number of voluntary items disclosed in their annual reports. In the index, each item scores 1 if it is disclosed and 0 if it is not disclosed. The current study uses the index developed by Lim et al. (2007). The voluntary disclosure items are categorized into three major types of information: social,, non-financial, and financial.

3.4.2. Independent and control variables

The independent variable in the current study is the board composition. In the current study the "board composition" includes the following perspectives: board size, board independence, ownership concentration of board members, type of board members (individual versus institutional), nationality ,member's age, educational level, and gender. Following the stream of previous studies, a number of firm characteristics are investigated as control variables. These variables include: firm size, industry type, financial leverage, profitability, and audit firm. Table 2 presents the definitions of these variables and the labels assigned to them.

Table 3: The definitions, proxies, and labels for the independent and control variables

Variable	Definition/Proxy	Label
Board size	The number of board members	BODS
Board Independence	Measured by two proxies: - The proportion of non-executive directors to total number of board members	NEXD
	- Duality of CEO and chairman positions	DUAL
Ownership concentration of board members	The percentage of shares outstanding held by the board members	BOWN
Institutional Ownership	Percentage of institutional directors on the board	INST
Foreign ownership	Percentage of non-Jordanian directors on the board	FORG
Age of board members	Percentage of directors above 40 years old	AGE
Educational level of board members	Percentage of directors holding a bachelor degree	EDU

Gender of board members	Percentage of female directors on the board	GEN
Firm size	Log of the firm's total assets	SIZE
Firm's business sector	Dummy Variable: 0 for insurance sector, 1 for other sectors	SEC
Financial leverage	Ratio of non-current liabilities to shareholder's equity	FLEV
Profitability	Return on equity	PROF
Audit firm	Dummy variable: 0 for Big 4 audit firm and 1 for other audit firms	AUDT

3.4.3. Model

The following model is estimated to examine the relationship between board composition and the level of voluntary disclosure:

$$DISC = \beta_0 + \beta_1 BODS + \beta_2 NEXD + \beta_3 DUAL + \beta_4 BOWN + \beta_5 INST + \beta_6 FORG + \beta_7 AGE + \beta_8 EDU + \beta_9 GEN + \beta_{10} SIZE + \beta_{11} SEC + \beta_{12} FLEV + \beta_{13} PROF + \beta_{14} AUDT + u$$

Where:

DISC	Voluntary disclosure
BODS	Board size
NEXD	Proportion of non-executive directors
DUAL	Duality of CEO and chairman positions
BOWN	Ownership concentration of board members
INST	Institutional ownership
FORG	Foreign ownership
AGE	Age of board members
EDU	Educational level of board members
GEN	Gender of board members
SIZE	Firm's size
SEC	Firm's Business sector

FLEV	Firm's Financial leverage
PROF	Firm's profitability
AUDT	Auditing firm
u	Error term, $(0, \sigma^2)$
B_k	Regression coefficients

3.5. Hypotheses development

3.5.1. Board size

Monitoring and controlling management actions are the most important functions of the board of directors. According to Gandia (2008) increasing the number of board members improves the capability of the board in monitoring and controlling management actions. This enhances the transparency and the disclosure of more information by management. Adam *et al.*, (2005) argue that larger boards have varied experiences and dispersed opinions. This, in turn, increases their monitoring capacities, and enhances the firm's disclosure policies. Based on the previous discussion, the following hypothesis is proposed;

H1: *There is a significant positive relationship between board size and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.2. Percentage of non-executive directors on the board

Non executive directors are viewed as a control mechanism as they perform an independent monitoring function (Patelli and Prencipe, 2007). Their presence on the board could control the agency problem and reduce the information asymmetry between management and shareholders by providing more voluntary disclosure (Lim *et al*, 2007). Based on the previous discussion the following hypothesis is proposed;

H2: *There is a significant positive relationship between board independence and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.3. Duality of CEO and chairman positions

Duality of CEO and chairman positions may distort the board independence and reduces the effectiveness and efficiency of the board monitoring and controlling capabilities (Khanchel, 2007). Role duality concentrates the power of managing business affairs in the hands of a single individual (Ho and Wong, 2001; Gul and Leung, 2004). This may reduce the quality and quantity of the information disclosed and consequently raises the information asymmetries problem (Li *et al.*, 2008). Based on the previous discussion the following hypothesis is proposed;

H3: *There is a significant negative relationship between Duality of CEO and chairman positions and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.4. Ownership concentration of board members

Akhtaruddin and haron (2010) argue that ownership concentration reflects the influence of the majority shareholders. Outside investors and/or shareholders have no access to the firm's information. As a result, they depend on management to obtain the information they need. They impact management to disclose adequate information through the board. This suggests that the higher the outside ownership (i.e., the lower the level of board ownership concentration) the greater the monitoring over the board, the greater the disclosure (Eng and Mak, 2003). Based on the previous discussion the following hypothesis is proposed;

H4: *There is a significant negative relationship between board ownership concentration and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.5. Institutional ownership

Ajinkya et al. (2005), find that institutional ownership is favourably associated with the properties of managerial earning forecasts.(Chau and Gray 2002; Makhikja and Patton 2004; Barako et al. 2006) find a statistically significant relationship between the level of disclosure and external ownership. Eng and Mak 2003; Haniffa and Cooke 2002) find no relationship between the two and Arcay and Vázques (2005) find significant negative relationship. On balance, positive relationship between the proportion of common stock held by institutional investors and the extent of voluntary disclosure in firms' annual reports. Based on the previous discussion the following hypothesis is proposed;

> H5: *There is a significant positive relationship between institutional ownership and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.6. Foreign investment

According to Bokpin and Isshaq (2009), foreign ownership is viewed as a mechanism for improving corporate governance. Mangena and Tauringana (2007) argue that firms provide more disclosure to reduce information asymmetry between foreign and domestic investors. Since foreign investors

have less information than domestic investors, this encourages them to invest more in firms that disclose more information (Mangena and Tauringana, 2007). As a result, it can be argued that the presence of foreign investors, as an aspect of governance mechanism, may lead to increase the level of voluntary disclosure. Based on the previous discussion the following hypothesis is proposed:

H6: *There is a positive significant relationship between foreign investmenty and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.7. Member's Age

According to Hambrick and Mason (1984), young managers tend to be more risk taker than older managers. They are highly motivated to process new ideas, and less acceptable to status quo. Thus, firms with young managers experience higher growth rates than firms with older managers (Barker and Mueller, 2002). Based on the previous discussion the following hypothesis is proposed;

H7: *There is a significant relationship between board's members age and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.8. Member's educational level

Education level refers to the academic credentials or degrees an individual has obtained. Although education level is a continuous variable, it is frequently measured categorically in research studies. We focus on the level education to know how much it reflect in his decision.

H8**:** *There is a positive significant relationship between board's members educational level and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.9. Member's gender

The diversifying in board characteristic, especially in gender may benefit the board's decision making process. New perceptions are presented, and ideas are mutually exchanged (Alvarez and McCaffery, 2000). According to Adams and Ferriera (2008) female directors have a strong effect on board input and output. Furthermore, they have better attendance records than male, and are more likely to join monitoring committees. On the other hand, disclosure is a managed activity which can be explained by the context in which it occurs (Gibbins *et al*., 1992). Since disclosure is the function of the board, therefore, the gender diversity of its members may

explain the disclosures practices of the firms in the annual reports. Based on the previous discussion the following hypothesis is proposed:

> H9: *There is a positive significant relationship between the presence of female directors on the board and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.10. Firm Size

Several studies used the firm size to measure the level of voluntary disclosure. They found that firm size has a positive association with voluntary disclosure (See for example: Ho and Wong, 2001; Eng and Mak, 2003; Gul and Leung, 2004; Boesso and Kumar, 2007; Lim *et al*., 2007; Xiao and Yuan, 2007). Larger firms are likely to make more voluntary disclosure to provide creditors with good information and thus, reduce the cost of capital. Furthermore, disclosing more information fulfils the demand for information by investors and financial analysts which, in turn, reduces the asymmetries information problem (Hossain *et al*., 1995). Based on the previous discussion the following hypothesis is proposed:

> H10: *There is a positive significant relationship between the firm's size and the level of voluntary*

disclosure in the annual reports of Jordanian firms listed on ASE.

3.5.11. Sector

Meek *et al.* (1995) argue that voluntary disclosure varies with business sector. For example, environmental related firms such as oil, chemicals, mining tends to disclose more non-financial information concerning to its social accountability. Furthermore, manufacturing firms tend to disclose more voluntary information than non-manufacturing firms (Lim *et al*., 2007). In contrast, the study of Ferguson *et al*., 2002, found little support for the impact of industry effect on voluntary disclosure. Based on the previous discussion the following hypothesis is proposed:

H11: *There is a significant relationship between the firm's business sector and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.12. Leverage

Long-term debts are more risky, so creditors would require more information to reduce this risk (Chau and Gray, 2002). Firms with high debt levels are expected to incur higher monitoring costs. They are inclined to disclose more information in their annual reports to avoid these costs

(Ahmed and Courtis, 1999), and to reduce information asymmetries (Inchausti, 1997). Empirically, Ahmed and Courtis (1999) reported a significant positive association between leverage and disclosure levels. Ferguson *et al*., (2002) found a significant and positive relation between financial leverage and voluntary disclosure on financial information. Uyar and Kilic (2012) found that leveraged firms disclose more information to satisfy information needs of the creditors. Based on the previous discussion the following hypothesis is proposed:

> H12: *There is a positive significant relationship between the firm's financial leverage and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.13. Profitability

Well-performing firms tend to disclose more accounting information to attract the interest of investors Meek *et al*. (1995). Firms with high profitability make more corporate disclosures to signal their good performance to investors (Rafournier, 1995; Inchausti, 1997; Watson *et al*., 2002), and thus, promote a positive impression (Alsaeed, 2006). Ahmed and Courtis (1999) reported a positive association between voluntary disclosure levels and firm's profitability measured by ROE and ROA. Based on the previous discussion the following hypothesis is proposed:

H13: *There is a positive significant relationship between the firm's performance and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.5.14. Auditing firm

Big-4 audit firms influences the reporting practices of their clients because of their wide internationalized experience (Wallace *et al*., 1994). Furthermore, they use the information disclosed by their clients to signal their own quality (Inchausti, 1997). Thus, firms associated with Big-4 audit firms are expected to disclose more voluntary information. Empirically, Raffournier (1995) reported that firms audited by the Big-6 disclose significantly more information than firms audited by less-known auditors. Camfferman and Cooke (2002) found a significant association to Big-6 audit firm which indicate greater comprehensiveness of disclosure. Hossain and Taylor (2007), found a positive relationship between voluntary disclosure and local audit firms linked with international audit firm.Based on the previous discussion the following hypothesis is proposed:

H14: *There is a positive significant relationship between the type of auditing firm and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

3.6. Data analysis

Appropriate statistical techniques are used to test and analyse the data. These include: descriptive statistics, correlation, Kolmogrov-Simernove, and linear regression.

CHAPTER FOUR: DATA ANALYSIS AND HYPOTHESES TESTING

4.1. Introduction

4.2. Descriptive analysis

4.3. Regression analysis

4.1. Introduction

This chapter aims at analyzing the estimation result of the empirical model used in the current study to accomplish the study objective. Therefore, it presents the result of the descriptive statistics for the variables used in the study, as well as, the estimation result of the empirical model using OLS method.

4.2. Descriptive analysis

This section presents the most important descriptive statistics of all variables used in the current study using the mean and standard deviation.

- Board size in Jordanian firms ranges between 5 and 13 members with an average size of approximately 8 members (SD= 2.22). Similar results are found at the industrial and service sectors. However, in the insurance sector the average board size is approximately 9 members (SD= 1.5). This can be explained by the differences in the corporate governance codes of the insurance sector on one side and the industrial and service sectors on the other. The former code recommends a board between seven and fifteen members, whereas, the later recommends a board between five and fifteen members.

- The duality of the CEO and the board chairman positions is found in approximately 14% (S.D= 0.34) of the firms, with highest duality in the service sector.

- The non-executive members in Jordanian firms constitute approximately 88% of the board (S.D = 0.16). At the sectors level, Insurance firms has the highest percentage of non-executive members 92% (S.D = 0.8) on board, while the service sector has the lowest percentage of non-executive members 85% (S.D = 0.19) on board. The highest percentage in the insurance sector may be explained by the extensive monitoring and regulations imposed on this sector not only by Jordan Securities Commission but also by Jordan Insurance Commission.

- On average board ownership concentration in Jordanian firms is approximately 40% (S.D= 0.22). At the sector level, the lowest concentration is found in the insurance sector where board concentration is approximately 18% (S.D= 0.8).

- On average, the percentage of institutional directors in Jordanian firms ranges between 2% and 91% with an overall average of approximately 51% (S.D= 0.31).

- On average the percentage of non-Jordanian board members ranges between 15% in the industrial sector (0.15) and 20% (S.D= 0.25) in the insurance sector, with an overall average of approximately 17% (S.D= 0.24) in all three sectors.

- The percentage of board members in Jordanian firms who are above 40 years old is approximately 75% (S.D= 016). Similar result is found at the sector level.

- The average number of board members in Jordanian firms who have at least a bachelor degree is approximately 94% (S.D= 0.21). In addition, 30% of these members hold a postgraduate degree.

- The percentage of female directors in Jordanian firms in the three sectors is almost similar with an average of approximately 17% (S.D= 0.11).

4.3. Regression analysis

4.3.1. The assumptions and problems of multiple regression analysis

Multiple regression analysis relies upon a number of classical assumptions. These assumptions are critical for the valid interpretation of the regression estimates (Gujarati, 2003). Violations of these assumptions may affect the

credibility of the results obtained (Osborne and Elaine, 2002). The standard regression problems relating to normality outliers, multicollinearity, and homoscedasticity, are examined. The results are presented in the following subsections.

4.3.1.1. Normality

The descriptive analysis of the independent variables discussed in sections 3.4 and 4.2 shows dispersions in some of these variables as revealed by their standard deviation. This indicates a normality problem. The appropriate transformation process has been performed on these variables to solve the normality problem. Furthermore, the classical linear regression model assumes that the distribution of the regression residuals is normal (Gujarati, 2003). In the current study, normality was examined by plotting the histograms and the normal Q-Q plots for the regression residuals. The normal curves superimposed in the histograms approximate to bell shapes. This indicates that the regressions' residuals have, roughly, the shape of a normal distribution.

4.3.1.2. Multicollinearity

Multicollinearity refers to the presence of a high level of correlation amongst the independent variables. This may lead to incorrect inferences and conclusions (Lind et *al.*, 2006). In the current study, multicollinearity

was assessed both before running the multiple regression analyses and during the multiple regression procedures. Before running the multiple regression analyses, a bivariate correlation analysis was performed on the independent variables to detect the presence of severe multicollinearity amongst them. The result of the correlation analysis amongst the independent variables is shown in table 4. The highest value of the Pearson correlation coefficients (*r*), was 0.518. This means that all coefficients were well below the generally accepted level of 0.8. Thus there was no apparent evidence on the presence of severe multicollinearity amongst the independent variables. During the multiple regression procedure, multicollinearity was assessed by the variance inflation factor (VIF) Gujarati, (2003) suggested that if the VIF of a variable is greater than 10, then the variable is considered highly collinear. In the current study, the VIF for the variables investigated were well below the accepted levels suggested by Gujarati, (2003). These statistics are shown as part of table 5 that summarizes the results of the regression analysis in Section 4.3.3. Based on the results of the different tests performed it can be concluded that multicollinearity was not problematic in the current study.

Table 4: The result of the correlation analysis between independent variables

Variables	SEC	BODS	DUAL	BOWN	GEN	INST	EDU	ROE	AUDT	FLEV	SIZE	NEXD	AGE	FORG
SEC	1													
BODS	0.1463	1												
DUAL	-0.1763	-0.1537	1											
BOWN	-0.1045	-0.2754	0.3068	1										
GEN	-0.0193	-0.0712	0.0824	-0.0198	1									
INST	0.1917	0.0239	-0.0317	0.0611	-0.1694	1								
EDU	0.0231	0.0676	0.089	-0.0265	0.0433	0.1559	1							
ROE	-0.0912	-0.0482	0.1541	0.2498	0.0899	0.1924	-0.0016	1						
AUDT	0.2262	0.2444	-0.0207	-0.2068	0.1312	0.0062	-0.2457	-0.231	1					
FLEV	0.3855	-0.1172	0.0341	-0.0872	-0.0136	0.004	0.0049	0.0229	-0.2656	1				
SIZE	0.0517	0.415	-0.062	-0.1346	0.0234	0.2721	-0.0375	-0.042	0.2618	0.1486	1			
NEXD	-0.0785	-0.1544	**0.5187**	0.4253	0.2942	0.16	0.0438	0.1111	0.0761	-0.1811	0.0438	1		
AGE	-0.1021	0.0914	-0.0567	-0.0509	0.0005	-0.0338	-0.1573	-0.2332	-0.0582	0.042	0.0034	0.1072	1	
FORG	-0.0086	-0.1176	-0.0146	-0.0728	0.2938	0.2516	-0.1118	-0.1026	0.1098	-0.0074	0.0983	0.3391	0.0185	1

4.3.1.3. Heteroscedasticity

Heteroscedasticity means that the variance of residuals differs across all levels of the independent variables. Marked heteroscedasticity may cause serious distortion of the findings (Berry and Feldman, 1985). In the current study, this assumption was examined by the Breusch-Pagan-Godfrey test (PBG). The Breusch-Pagan-Godfrey test is found to be statistically significant (Chi2 = 0.09, P= 0.046). This implies that the homoscedasticity assumption is violated (Gujarati, 2003). Fortunately, Stata 11 corrects the model's results to adjust for heteroscedasticity. The corrected results are presented in table 5.

4.3.2. Empirical results of the regression analysis

A summary of the results of the regression analysis performed on the model is presented in table 5. Only the results of the general (initial) model and the final model identified are presented in the table. The comment will cover both models with more emphasis on the final model.

According to table 5, the general model has an R^2 of 0.263. This means that the model explains almost 26% of the voluntary disclosure in Jordanian firm's annual reports. Furthermore, the high probability of the F statistic (.000) indicates that that the null hypothesis that all coefficients = 0 can be rejected. This means that the independent variables are jointly significant in

explaining the voluntary disclosure. However, not all independent variables have statistically significant coefficients.

The final model, shown in table 5, has an R^2 of 0.306. This means that the model explains almost 31% of the variation in the voluntary disclosure. Furthermore, the high probability of the F statistic (.000) means that the independent variables, in the final model, are jointly significant in explaining the voluntary disclosure. The table also shows that out of the 14 hypothesised independent variables, only 5 variables have statistically significant relationships with the voluntary disclosure.

According to table 5, AGE and INST have highly significant positive relationships with DISC (β= .685, ρ= .000) and (β= .345, ρ= .004) respectively. This means that firms composed of boards with more older and foreign members, discloses more voluntary information in their annual reports. The same table shows that BOWN and SEC have significant negative relationships with voluntary disclosure (β= -.299, ρ= .018) and (β= -.162, ρ= .024). This means that the higher the level of ownership concentration, the less voluntary information is disclosed by the firms. Similarly, insurance firms tend to disclose more information than industrial and services firms. In addition, GEN tends to be significant (β=.465, ρ= .068) when a 10% level of significance is used. This means that the more

female members on the board, the more voluntary information disclosed by the firm.

Table 5: Summary of the regression results

Dependent Variable: DISC		
Independent Variables	**General Model**	**Final Model[1]**
BODS	-.003	
	(.874)	
NEXD	.510	
	(.720)	
DUAL	-.069	
	(.496)	
BOWN	-.334	-.299
	(.031)	(.018)
INST	.067	.354
	(.539)	(.004)
FORG	.379	
	(.008)	
AGE	.731	.685
	(.000)	(.000)
EDU	.254	
	(.379)	
GEN	.348	.465
	(.230)	(.068)**
SIZE	.037	
	(.250)	
SEC	-.198	-.162
	(.034)	(.024)
FLEV	.002	
	(.896)	
PROF	.078	
	(.781)	
AUDT	-.052	
	(.479)	
Intercept	-.394	-.442
Adj R^2	.263	.306
F	.001	.000
VIF	1.13-1.98	1.03-1.28

Numbers in brackets below the coefficient are the probability levels of significance.
[1] Corrected for heteroscedasticity.
** Significant at 10%.

4.4. Testing hypotheses

This section considers each of the 14 hypotheses established in Chapter three using the result of the regression analysis reported in table 5. The criteria used to test the hypotheses include the sign (direction) of the beta coefficient (β) of the independent variable and the level of significance (ρ) as follows:

- If the estimated sign of (β) is the same as the expected sign, then the hypothesis is supported.
- If the level of significance (ρ) ≤ .05, then the support is significant.
- To accept a hypothesis, both criteria have to be met.

H1: *There is a significant positive relationship between board size and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

The regression result in table 5 reveals a negative relationship between BODS and DISC (β= -.003). However, their relationship is statistically insignificant at the .05 level (ρ= .874). Thus, H1 cannot be accepted

H2: *There is a significant positive relationship between the proportion of non-executive directors on the board and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

With reference to table 5, it's clear that NEXD and DISC are positively related (β= .510). However, the relationship is statistically insignificant at the .05 level (ρ= .720). Thus, H2 cannot be accepted.

H3: *There is a significant negative relationship between Duality of CEO and chairman positions and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

The regression result in table 5 reveals a negative relationship between DUAL and DISC (β= -.069). However, the relationship is found to be statistically insignificant the .05 level (ρ= .496). Thus, H3 cannot be accepted.

H4: *There is a significant negative relationship between board ownership concentration and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

According to table 5, BOWN has a significant negative relationship DISC (β= -.299). Furthermore, the relationship is found to be significant with ρ= .018. This means that there is a significant negative relationship between the level of board ownership concentration and the level of voluntary

disclosure in the annual reports of Jordanian firms. Based on the criteria employed in the current study H4 is supported and significant and thus can be accepted. The result of testing H4 suggests that the higher the level of board ownership concentration the less voluntary information is disclosed by the firms in their annual reports. This result is in line with what has been reported by other studies such as Eng and Mak, 2003 and Barako *et al.*, 2006. Because major shareholder can acquire information either through his position as a board member or directly from informal channels. Thus, firms with high ownership concentration tend to reduce additional information (Banghøj and Plenborg, 2008).

H5: *There is a significant positive relationship between institutional ownership and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

The regression result in table 5 reveals a positive relationship between INST and DISC (β= .067). However, the relationship is found to be statistically insignificant the .05 level (ρ= .539). Thus, H5 cannot be accepted.

H6: *There is a positive significant relationship between foreign ownership and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

Table 5 shows that FORG has a significant positive relationship with DISC (β= .354). Furthermore, the relationship is found to be highly significant with ρ= .000. This means that there is a significant positive relationship between the foreign investment and the level of voluntary disclosure in the annual reports of Jordanian firms. Based on the criteria employed in the current study H6 is supported and significant and thus can be accepted. The result of testing H6 suggests that the existence of foreign investment induces firms to disclose more voluntary information in their annual reports. This result is in line with what has been reported by other studies. For example, Mangena and Tauringana, 2007; Xiao and Yuan, 2007; and Bokpin and Isshaq, 2009 . Mangena and Tauringana (2007) explain that corporations provide more disclosure to reduce information asymmetry between foreign and domestic investors. Bokpin and Isshaq (2009) explain that the amount of foreign investments in firms with governance problems is less than their counterparts with good corporate governance practices.

H7: *There is a significant positive relationship between Board's members age and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

According to table 5, AGE has a significant positive relationship with DISC (β= .685). Furthermore, the relationship is found to be highly significant with ρ= .000. This means that there is a significant positive relationship between the age of board members and the level of voluntary disclosure in the annual reports of Jordanian firms. Based on the criteria employed in the current study H7 is supported and significant and thus can be accepted. The result of testing H7 suggests that the more mature – in terms of age- the board members, the more voluntary information disclosed by their firms in the annual reports. This result is in line with what has been reported by other studies. For example, Reed and Defillippi, 1990. older managers have richer skill-based competencies because of their experiences and practices (Reed and Defillippi, 1990).

H8: *There is a positive significant relationship between Board's members educational level and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

The regression result in table 5 reveals a positive relationship between EDU and DISC (β= .254). However, the relationship is found to be statistically insignificant the .05 level (ρ= .254). Thus, H8 cannot be accepted.

H9: *There is a significant relationship between the presence of female directors on the board and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

Table 5 reveals a positive relationship between GEN and DISC (β= .465). However, the relationship is found to be statistically significant at the .10 level (ρ= .068). Thus, H9 can no be accepted.

H10: *There is a positive significant relationship between the firm's size and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

The regression result in table 5 shows a positive relationship between SIZE and DISC (β= .037). However, the relationship is found to be statistically insignificant at the .05 level (ρ= .250). Thus, H10 cannot be accepted.

H11: *There is a significant relationship between the firm's business sector and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

Table 5 reveals a negative relationship between the dummy SEC and DISC (β= -.162). Furthermore, the relationship is found to be statistically significant at the .05 level (ρ= .024). Thus, H11 can be accepted. The result of testing H11 suggests that insurance firms disclose more voluntary information in their annual reports than industrial and services firms.

H12: *There is a positive significant relationship between the firm's financial leverage and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

With reference to table 5, there is a positive relationship between FLEV and DISC (β= .002). However, the relationship is found to be statistically insignificant the .05 level (ρ= .896). Thus, H12 cannot be accepted.

H13: *There is a positive significant relationship between the firm's performance and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

According to the result in Table 5, there is a positive relationship between PERF and DISC (β= .078). However, the relationship is found to be statistically insignificant the .05 level (ρ= .781). Thus, H13 cannot be accepted.

H14: *There is a positive significant relationship between the type of auditing firm and the level of voluntary disclosure in the annual reports of Jordanian firms listed on ASE.*

The regression result in Table 5 reveals a positive relationship between AUDT and DISC (β= .052). However, the relationship is found to be statistically insignificant the .05 level (ρ= .479). Thus, H14 cannot be accepted.

CHAPTER FIVE: CONCLUSIONS

5.1. Introduction

5.2. Summary of research results and conclusions

5.3. Recommendations

5.1. Introduction

This chapter summarizes the main findings of this study and provides the conclusion by analyzing the results using standardized methods that adapted to the nature of the data in addition to some recommendations.

5.2. Summary of research result and conclusion

This study has examined the impact of board composition on voluntary disclosure in the annual reports of Jordanian firms listed on the ASE. The study used the multivariate regression to analyze the data collected from 103 firms listed on ASE at the end of 2012. The study also controlled for those determinants of voluntary disclosure which have previously been documented in the literature. Overall, the study have found:

1- Board of directors in Jordanian firms can be described as independent.

2- Male directors rule Jordanian firms' boards. This reflects a dominant male culture that can be found in most Arab societies including Jordan.

3- Directors in Jordanian firms are highly educated. This result is consistent with the high literacy rate in Jordan that reached 99% in 2011 (http://www.unicef.org), and the expansion in higher education. That took place in Jordan in the last two decades.

4- Jordanian firms are governed by directors who can be described as mature and responsible .

5- Jordanian firms with high-level board ownership concentration tend to disclose less information in their annual reports. This is true as a major shareholder can acquire information either through his position as a board member or directly from informal channels. Thus, firms with high ownership concentration tend to reduce additional information (Bangh◌ّj and Plenborg, 2008).

6- Boards composed of largely old (mature and responsible) directors tend to voluntarily disclose more information. This true as these managers have richer skill-based competencies because of their experiences and practices (Reed and Defillippi, 1990). Thus, they have significant impact on the firm's performance. It's worth to mention that 40 is used in this study as a criteria for age because there is a references in Islam and other beliefs that 40 is the age of maturity and responsibility. For example, it is reported by many scholars that most prophets and messengers received their first revelation from Allah at the age of forty (Alsoyotee, 1999). In Surat Al-Ahqaf (verse 15) the Holy Quran sets the age of responsibility at 40, that being when the human reaches full maturity. The translation of verse 15: "*And We have enjoined upon man, to his parents, good treatment. His mother carried him with hardship and gave birth to him with hardship, and his gestation and weaning [period] is thirty months.* ***[He grows] until, when he reaches maturity and reaches the age of forty years,*** *he says,*

"My Lord, enable me to be grateful for Your favor which You have bestowed upon me and upon my parents and to work righteousness of which You will approve and make righteous for me my offspring. Indeed, I have repented to You, and indeed, I am of the Muslims"

7- Foreign ownership tends to induces Jordanian firms to voluntarily disclose more information to provide foreign investors with a good idea about the firms, and thus attract their investments. Furthermore, the presence of foreign investment serves as a mechanism for improving corporate governance especially in developing countries (Bokpin and Isshaq, 2009).

8- The presence of female directors on the board increase the level of voluntary disclosure. This is in line with the argument of (Alvarez and McCaffery, 2000) who believe that female directors bring with them to the board new perceptions, ideas and experience that benefits the decision making process.

9- Insurance firms tend to disclose more voluntary information in their annual reports than industrial and services firms. This may be attributed to the extensive monitoring and regulations imposed on the insurance sector not only by Jordan Securities Commission, but also by Jordan Insurance

Commission. Furthermore, the compulsory compliance to the corporate governance code for the insurance sector started in 2006, whereas, for the industrial and services firms it started in 2010. Finally, the nature of the insurance business that may be associated to higher risk may explain the higher level of voluntary information disclosed by insurance firms.

5.3. Recommendations

Based on the results of the study, the study recommends the following:

1- Policy makers may need to think of new means and methods to protect the rights of minor and/or outside shareholders in obtaining information about their investments. One possible suggestion is to increase the requirements of compulsory disclosure to include more items that are important for this category of stakeholders.

2- Jordanian firms might try to attract more foreign investment. Studies report that foreign ownership is a mechanism for improving corporate governance (Bokpin and Isshaq, 2009). Furthermore, foreign ownership can improve and develop the corporation in the developing country through the new skills and knowledge brought with them.

3- Jordanian firms might try to recruit more female directors to diversify experience as emphasized by the literature. This may benefit the board's

decision making process as new perceptions on various subject are presented and emerged with a mutual exchange of ideas stemming from board members with dispersed backgrounds and experience.

Researchers might further investigate other variables that explain the level of voluntary disclosure in the annual reports of Jordanian firms using longitudinal data analysis.

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APPENDIX

Table 6: Disclosure Index

Financial items
Market value
Return on equity
Return on equity
Return on assets
Leverage
Total assets
Sales forecast
Performance of the firm through three years ago
Market price of shares
Market shares analysis
Non-financial items
Brief history of the firm
Organization structure
Statement of strategy and objectives
Company policy on research and development
Line-of-business distribution of employees or N/A
List of training programmed
Employee education level
Social item
Environmental firm interested
Community service